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To: City Council Budget Committee Chair Joey Manahan and Members

From: Frank Genadio

Subject: Bill 42 (2017), CD1, Funding for Transit

Date: May 3, 2017

This testimony is submitted in opposition to Bill 42—as well as any bill that changes the wording of Ordinance 07-001, the enabling legislation for the rail project. This bill could lead to a rail project that could bankrupt the City and County of Honolulu with fiscally unconstrained costs. In January 2016 I submitted testimony to this City Council opposing Bill 23 (2015), CD2, Relating to the Transportation Surcharge, the bill that extended the surcharge on the General Excise and Use Tax (GET) for five years until December 31, 2027. My testimony included a recommendation for completing the 20-mile minimum operable segment (MOS) with the funds that would be available without an extension; that recommendation was for conversion of the steel wheels on steel rails (SWSR) system to urban magnetic levitation (maglev) technology. My oral testimony was unquestioned but Councilman Ron Menor, in remarks before the (positive) vote was taken, directly contradicted elements of my testimony, stating that: a maglev change would be too costly; the guideway cannot accommodate a change and the project would have to be re-initiated; the Full Funding Grant Agreement (FFGA) specifies steel wheels on steel rails; it is too late to change; and the council was being responsive to the 57 percent majority who favor rail. The following addresses each of those statements.

A maglev change can be accomplished and the city will save money by making a switch to maglev. My numbers are derived from information in the book, "Maglev America," by American inventors James Powell and the late Gordon Danby, the men who hold the patents for both first- and second-generation superconducting maglev (SCM). The book describes conversion of the New York City subway and elevated train system, which uses the same gauge as the city's SWSR plan, 4 feet, 8 inches between the rails. Drs. Powell and Danby were awarded the Franklin Institute's Medal for Engineering for their invention of SCM. Other Franklin medal holders include, for example, Alexander Graham Bell, Neils Bohr, Thomas Edison, Albert Einstein, Stephen Hawking, Nikola Tesla, and Orville Wright. In other words, their recommendations can be trusted.

There is no need to initiate a completely new project because the existing guideway can be modified for use by both SWSR and maglev trains, as described in "Maglev America" (Chapters 7 and 8). Emplacement of "levitation" panels between the rails is a simple and relatively inexpensive process, and can be done in the down-time even when SWSR trains are in service.

Despite the claim described on the Web site of the Honolulu Authority for Rapid Transportation (HART) that the FFGA specifies steel-on-steel technology, there is not one reference to "steel-on-steel" in that document. Instead, the FFGA describes the project scope as including 80 light

metro fully automated (driverless) rail vehicles. That description fits not only maglev but also conventional monorail.

The "too late to change" mantra has been used for almost a decade. If the city decides it can save money and upgrade to superior operations by converting to maglev, a compelling case can be made to officials in the U.S. Department of Transportation and the Federal Transit Administration (FTA). FTA officials have already shown their disapproval of the project by pointedly withholding a portion of federal funds until a fiscal recovery plan is provided (i.e., the one just delivered). A maglev proposal can convince those officials that federal funds will be put to good use rather the current perception of "throwing good money after bad."

Councilman Menor's statement last year about the 57 percent majority who favored rail did not mention that support was based on an estimated project cost of \$6.57 billion. A further reading of that poll showed a 59 percent majority opposing rail if costs were to reach \$8 billion, a 70 percent opposing majority if costs reach \$10 billion, and a 78 percent opposing majority if costs reach \$12 billion. It looks like we are at 70 percent negative—and climbing. Even determined rail opponents are probably amazed that costs have significantly surpassed their "worst case" estimates a few years ago of \$7 billion.

There is little doubt about the purpose of Bill 42, with or without the subterfuge in the CD of removing all of the wording pertaining to funding limitations in the ordinance. It is to give Mayor Kirk Caldwell, the city administration, and HART a "blank check" (even as they still hope for a GET surcharge "bail-out" from the state as of this writing) for not only funding rail construction but also its operations and maintenance (O&M)—virtually all of it "on the backs" of local taxpayers, including businesses and property owners (as well as renters, who will see more costly leases driven by increased taxes on residence owners).

Full development cost estimates (for the most part) exclude O&M, for which federal funds are not available to any municipality with a population above 200,000. HART testimony in the State Legislature specified that rail O&M for the first full year of operations (2026?) would be \$126 million. Any cost estimating of the rail project must address O&M along with system development. It should be added that the current discussion is only about the MOS and does not include the locally preferred alternative (LPA) approved by the City Council in 2006.

I am sure that you were anticipating the crafting of a simple funding bill that addressed a state-approved extension of the GET surcharge for rail of ten or twenty years or even one "in perpetuity" as initially requested by the mayor. You may still get it but if the State Legislature stays with its proposed transit accommodations tax increase, you are faced with some hard choices that will probably be even more unpopular with local resident taxpayers.

This committee should not only vote against forwarding Bill 42 regardless of what happens in the Capitol but also call for a full review of the rail project that would include its cost, its technology, and even its alignment. The review should be conducted—and even funded—by FTA officials to ensure its objectivity. This is extremely important because O'ahu taxpayers and commuters have lost confidence in the mayor and HART due to the project's cost overruns and delays that left us with little remaining from the promises made years ago: remember "on time" and "on budget?"

In testimony to the State Legislature over the past few months, I have stated that conversion to maglev can deliver a full 20-mile system that will meet the terms of the 2012 FFGA, including all 80 rail cars (a mix of SWSR and maglev), all 21 stations, and the Pearl Highlands Transit Center—and do so within a budget of \$6.8 billion (i.e., the amount realized through the GET extension through 2027 and federally obligated funds). This city can deliver the project's Plan A for the Plan B price in HART's latest recovery plan. You ignored my 2016 testimony; in the year since then, rail cost estimates rose to \$8.1 billion last May and then to \$9.5 billion in December—with the federal worst case estimate of \$10.79 billion. The City Council now has a history of complicity in the fiscal debacle that rail has become—dating back to at least 2008 when it abrogated its responsibility to taxpayers after stating in Ordinance 07-001 that it "reserves the right to select the technology for the fixed guideway system for the locally preferred alternative." Are you now willing to also abrogate the wording for the capital costs and any interest being paid entirely from GET surcharge revenues, interest earned on the revenues, and any federal, state, or private revenues? What do you think the increases will be on property taxes and fees for anything the mayor decides will be used to fund rail development? Will you have rational explanations for your constituents as construction and (later) O&M costs continue to escalate?

In a straight-up comparison, maglev O&M yearly costs would not only be about 40 percent of SWSR but even be a little less than the at-grade proposed costs of \$54 million. O&M savings with maglev vis-à-vis SWSR would be in the billions of dollars over 30 years of rail operations. Are you also ready to ignore those numbers and try to explain why SWSR is the better choice?

Your primary responsibility is to the taxpayers and commuters of O'ahu, to provide the best and most cost-effective rail transit system possible while staying within the existing budget. This council was deceived by the administration last year, just as previous councils were deceived by an earlier administration. Are you ready to solve the (rail) problem or continue to be part of the problem? Do what is right: Leave Ordinance 07-001 alone by killing Bill 42, and request an FTA review of the project even if the funding materializes for continuing an inferior and costly SWSR system. Mahalo and Aloha.

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